2019 Drinking Water Quality Report

League City TEXAS

Consumer Confidence Report

Representing Reporting of 2018

Members of

Annual Water Quality Report

January 1 – December 31, 2018

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

CITY OF LEAGUE CITY is purchased Surface Water from the Gulf Coast WA and City of Houston.

CITY OF LEAGUE CITY purchases water from GULF COAST WATER AUTHORITY TX CITY. GULF COAST WATER AUTHORITY TX CITY provides purchase surface water from [Brazos River] located in [Galveston County]. CITY OF LEAGUE CITY purchases water from CITY OF HOUSTON. CITY OF HOUSTON provides purchase surface water from [Trinity River] located in [Harris County].

For more information regarding this report contact:
Tommy Arredondo, Water Superintendent (281) 554-1041

We Welcome Your Comments!

There are many opportunities available to learn more about the League City Water Production Department and water quality.

- For questions or concerns about water quality, call (281) 554-1041.
- For inquiries about public participation and policy decisions, call (281) 554-1033.

The Water Production Department is part of the city government.
The City Council meets the second and fourth Tuesdays of each month.
Call (281) 554-1030 for meeting times and locations.

Sources of Drinking Water:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPAs Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Information about Source Water Assessments

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact (Tommy Arredondo, Water Superintendent) 281-554-1041.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: www.tceq.texas.gov/gis/swaview

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: http://dww2.tceq.texas.gov/DWW/

Water Sources: Major Aquifer – Gulf Coast Aquifer | River – Trinity River, Brazos River

Source Water Name		Type of Water	Report Status	Location
Calder Road	Calder Road	GW	Y	2696 Calder Dr.
Walker Street	Walker Street	GW	Y	700 W. Walker St.
3rd Street at Park	3rd Street at Park	GW	Y	516 3rd St.
South Shore Harbor	South Shore Harbor	GW	Y	2600 FM 518 East
Country Side	Country Side	GW	Y	5929 FM 518 West
Grissom Rd / Northside	Northside	GW	Y	4200 Grissom Rd.
Dickinson Ave.	Dickinson Ave	GW	Y	2050 Dickinson Ave.
Eastside	Eastside	GW	Y	7503 South Shore Blvd
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	PLANT-2690 Calder Rd
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Meadowbend Plant 2819 Wood Hollow Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	South Shore Harbor Plant 2800 FM 518
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Bayridge Plant 307 Windward Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	South Hwy 3 Plant 18530 Hwy 3
SW From City of Houston SE Plant	CC From TX1010013 City of Houston	SW	Y	Walker Plant 700 W. Walker St.
SW From GCWA TX City	CC From TX0840153 Gulf Coast WA	SW	Y	Calder Road Plant 2690 Calder Rd.

Definitions

The following tables contain scientific terms and measures, some of which may require explanation.

Level 1 Assessment:
A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment:
A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level (MCL)
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG)
The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Regulated Contaminants
Contaminants detected at this entry point that have an enforcable MCL.

Treatment Technique or TT
A required process intended to reduce the level of a contaminant in drinking water.

Unregulated Contaminants & Secondary Standards
Contaminants detected at this entry point that do not have an enforcable MCL, but may have an MCLG or SCL

Secondary Contaminant Level (SCL) represents reasonable goals for drinking water quality & provides a guideline for public water suppliers

About the Following Tables...

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The US EPA requires water systems to test for up to 97 contaminants.

Disinfectant Residual

A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).'

Year	Disinfectant Residual	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Likely Source of Contaminant
2018	Chloramines	2.00	0.50 – 3.80	4.0	4.0	mg/L	Water additive used to control microbes..

Regulated Contaminants

EP002: City of Houston Southeast Water Purification Plant.No averages, all data based on single result.

Primary Standards	Contaminant	MCL	MCLG	Reading
	Atrazine (µg/L)	3	3	.19
	Barium (mg/L)	2	2	0.0522
	Fluoride (mg/L)	4	4	0.21
	Nitrate (mg/L)	10	10	0.32
Secondary Standards	**Contaminant**	**SMCL**		**Reading**
	Chloride (mg/L)	250		33
	Fluoride (mg/L)	2		0.21
	Manganese (mg/L)	0.05		0.0116
	TDS (mg/L)	500		204

Lead and Copper

ACTION LEVEL GOAL (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. **ACTION LEVEL :** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

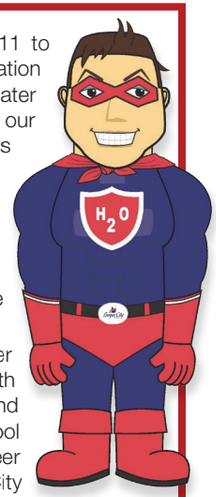
Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Unit of Measure	Violation	Likely Source of Contamination
Copper	2018	1.3	1.3	0.493	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2018	0	15	4	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Radioactive Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Combined Radium 226/228	1/22/2013	1	1 - 1	0	5	pCi/L	N	Erosion of natural deposits.

**EPA considers 50 pCi/L to be the level of concern for beta particles.*

***Because the beta particle results were below 50pCi/L, no testing for individual beta particle constituents was required.*



Captain H2O was created in 2011 to assist with public outreach and education about the importance of water conservation. He appears, along with our Water Conservation Team, at various public venues and in 2015, at several CCISD and DISD schools where our water conservation program was presented to enthusiastic students. We hope to continue these school visits throughout the district in the 2019/2020 school year.

In 2019, we held our 9th annual Water Conservation Poster Contest and 6th annual Essay Contest with CCISD and DISD schools, hosted a Pre-school Story Time that featured Sarah Greer Osborne with the League City Communications and Media Relations. 2018 Texas Water Development Board Water Loss Audit Report: Total Water Loss- Percentage 9.92%.

For more information about water conservation or inquiries about the Water Conservation Team and Captain H2O presenting a water conservation program, please call (281)554-1041, visit www.leaguecity.com or **click here** to view our Water Conservation page.

Gulf Coast Water Authority – Thomas Mackey Water Treatment Plant – For Regulated, Unregulated, and Secondary Contaminants please call (409) 948-6415.

City of Houston Southeast Water Purification Plant – For Regulated, Unregulated, and Secondary Contaminants - please call (713) 837-0311.

Abbreviations

Avg	Regulatory compliance with some MCLs is based on running annual average of monthly samples.
MFL	million fibers per liter (a measure of asbestos)
NTU	Nephelometric Turbidity Units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	micrograms per liter (µg/L) or parts per billion - or one ounce in 7,350,000 gallons of water
ppm	milligrams per liter (mg/L) or parts per million - or one ounce in 7,350 gallons of water
ppt	parts per trillion, or nanograms per liter (ng/L)
ppq	parts per quadrillion, orpicograms per liter (pq/L)
ND	Non detect, contaminant not detected
mrem	millirems per year (a measure of radiation absorbed by the body)
NA	not applicable
ND	Non detect, contaminant not detected

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Compliance Average Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Haloacetic Acids (HAA5) *	2018	39	5.3 - 45.4	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
* The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over year.								
Total Trihalomethanes (TTHM) *	2018	43	23.7 - 42.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
*The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over year.								
* EPA considers 50 pCi/L to be the level of concern for beta particles.								

Inorganic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Barium	2018	0.0376	0.0376 - 0.0376	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	0.2	0.22 - 0.22	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2018	1	0.02 - 1.14	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	03/30/2015	0.02	0.02 - 0.02	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Synthetic Organic Contaminants INCLUDING Pesticides AND Herbicides

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Atrazine	2018	0.15	0 - 0.15	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2018	0.18	0 - 0.18	4	4	ppb	N	Herbicide runoff.

Volatile Organic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Xylenes	2018	0.0014	0 - 0.0014	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contaminant
0	5% of monthly samples are positive.	3.5		0	N	Naturally present in the environment.

Revised Total Coliform Rule (RTCR)

The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children,

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MAJOR (RTCR)	09/01/2018	09/30/2018	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Water Wise FAQ's

How is water recycled/reclaimed?

Water utilities use a variety of well-tested and reliable treatment processes to recycle/reclaim water. Utilities generally describe the various stages of treatment rather than the technologies utilized when referring to water quality, as there are multiple treatment techniques for achieving essentially the same result. Generally speaking, the four core stages of treatment are Primary Treatment, Secondary Treatment, Tertiary or Advanced Treatment, and Disinfection. The number of treatment steps will vary based on how the water will be used. Most recycled water, however, will undergo some form of disinfection.

Is recycled/reclaimed water safe?

Reclaimed water is highly engineered for safety and reliability so that the quality of reclaimed water is more predictable than many existing surface and groundwater sources. Reclaimed water is considered safe when appropriately used. Although reclaimed water is of very high quality, it is not used directly for drinking water in the United States. Reclaimed water planned for use in recharging our aquifers or augmenting our surface water receives adequate and reliable treatment before mixing with naturally occurring water and undergoing natural restoration processes. Some of this water eventually becomes part of our drinking water supplies.

How can I tell if I have leaks in my home plumbing system?

A. Checking your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.

B. Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl before you flush, you have a leak.

C. Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.

How concerned should I be about a leaky toilet?

A leaky toilet can waste as much as 200 gallons of water a day. A common reason toilets leak is that the toilet flapper has become worm and no longer seals closed once the toilet has filled.

How can I conserve water with my swimming pool?

If you have a pool, keep the water level low to minimize splashing, and use a cover to slow evaporation. An average-sized pool can lose about 1,000 gallons of water per month if left uncovered.

League City TEXAS

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (281) 554-1000.

City of League City
Water Production Department
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League City, TX 77573

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